

## S P E C I F I C A T I O N

METHOD AND SYSTEM FOR COLLECTIVELY GENERATING  
USER-CREATED DESIGNS OF PRODUCTS AND PROPERTY  
VIA A COMMUNICATIONS NETWORK

## BACKGROUND OF THE INVENTION

The field of the invention generally relates to methods of generating graphic designs. The invention relates more particularly to a computer method of mass-generating and acquiring design submissions of various products, merchandise, and other items from the general public by means of a communications network, such as the Internet. Moreover, the method may incorporate an award incentive to promote greater participation in the creation and submission of graphic designs.

It has long been understood that one of the foundational premises of successful product merchandising and sales is the aesthetic and outward appearance of a product. While necessity and utility may effect the decision to purchase, it is a particular fashion, style, or appearance that so often determines consumer preference of one product brand over another, and ultimately the consumer's purchase selection. For this reason, many producers of commercial products and goods consider aesthetic product design as a vital component to their long-term marketing and sales strategies, as well as their ability to compete effectively.

1           Unfortunately, given the continuous evolution of tastes,  
2 trends, and styles, manufacturers find themselves investing  
3 heavily in market research and professional design consultants,  
4 in order to determine the popular "new look" for upcoming  
5 products. These traditional methods, wherein public opinion is  
6 sampled and professional designers are hired, can be unduly  
7 costly without necessarily achieving an accurate reflection of  
8 popular taste, style, or opinion. This is due in part to the  
9 inherently limited number of designs that can realistically be  
10 generated by an individual design consultant, or a products  
11 design group. Furthermore, market polling and testing only  
12 samples a relatively small number of individuals, and is at best  
13 an indirect approximation of the popular view of an existing  
14 product.

15           Today, with the advent and growing prominence of the  
16 Internet as a communications and commercial medium, producers and  
17 suppliers are now better able to ascertain the popularity of  
18 their products and product designs, by receiving comments and  
19 feedback directly from users/consumers via electronic mail, i.e.  
20 "e-mail." However, much of the consumer opinion and feedback  
21 transmitted over the Internet has traditionally been limited to  
22 textual comments, rather than user-designed graphic images  
23 detailing potential improvements and suggestions. This has been  
24 due to the substantially burdensome barriers associated with  
25 submitting original user-created graphic designs, particularly

1 when no incentives for such submissions are provided. In order  
2 to submit a new design, a graphic design software must first be  
3 purchased or otherwise obtained. After this is achieved, both  
4 time and energy must be spent in creating/editing a design using  
5 the software. Without access to a readily available graphic  
6 design environment and the proper incentive, these measures are  
7 generally not worth the user's time and effort in order for  
8 him/her to merely suggest and submit a new design.

9 Thus, there is clearly a need for a method which provides an  
10 easily accessible means for users/consumers to create and submit  
11 new designs for various existing products. In particular, by  
12 utilizing the pervasiveness of the Internet, the collective  
13 creativity of users in the general public may be harnessed to  
14 provide large-scale generation and collection of product designs.  
15 The advantage to manufacturers and producers would be the  
16 accumulation of a wealth of design ideas, many of which would not  
17 have been conceived of independently. In this manner, producers  
18 would be able to utilize the collected images to better ascertain  
19 consumer trends and styles of the times, and to produce a product  
20 accordingly so as to maximize sales.

#### 21 22 BRIEF SUMMARY OF THE INVENTION

23 It is an object of the present invention to provide a method  
24 of mass-generating user-created designs of products and other  
25 items designated for design over a communications network,

1 whereby a product manufacturer may acquire a multitude of new  
2 design suggestions from the general public.

3 It is a further object of the present invention to provide a  
4 method of mass-generating user-created designs utilizing a  
5 graphic design program having online graphic design tools and an  
6 online parts catalog, and capable of opening multiple concurrent  
7 sessions.

8 It is a still further object of the present invention to  
9 provide a method of mass-generating user-created designs, wherein  
10 interest in creating and submitting new designs of a product is  
11 promoted by providing an award incentive.

12 It is a still further object of the present invention to  
13 provide a networked computer system capable of providing online  
14 design tools and an online parts catalog on a remote host system  
15 which may be remotely accessed and operated by a plurality of  
16 users from client systems, for mass-generating the user-created  
17 designs.

18 The present invention is for a method and system for  
19 collectively generating for acquisition user-created designs of  
20 products over a communications network. The method and system  
21 establishes graphic design software on a remote host system which  
22 is connected to the communications network. The graphic design  
23 software is configured to run multiple, concurrent, and  
24 independent program sessions on the remote host system, and has a  
25 database module and a graphic tool module. The database module

contains product data for at least one product, with the product data preferably including a plurality of parts images for at least one product. The graphic tool module may be used to visually affect graphic images, including the parts images. The graphic design software is then made publicly accessible by remote interface means, wherein a plurality of users may each run a program session of the graphic design software on the remote host system from client systems connected to the communications network. Next, in response to each of the plurality of users, an independent program session of the graphic design software is run on the remote host system. This includes, under control of each of the plurality of users, selecting at least one target product to be designed, preferably selecting at least one parts image associated with the selected target product(s), creating a final design of the selected target product(s) using the graphic tool module, and submitting the final design to the remote host system. And finally, the final design is storablely received on data storage means of the remote host system. In this manner, the remote host computer system may collect a multitude of design submissions from a great number of users.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an overview flowchart pictorially depicting the general flow of information between a remote host system and multiple client systems via the Internet.

1           FIG. 2 is a block diagram of the information flow that  
2 occurs in the method and system for collectively generating user-  
3 created designs of products according to the present invention,  
4 upon accessing the remote host system.

5           FIG. 3 is a screen view of the graphic design software as  
6 seen from a client system, illustrating the parts catalog and  
7 editing tools available for designing a product, e.g. an  
8 automobile.

#### 9           **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

10           Referring now to the drawings, FIGS. 1-3 together show a  
11 method and system (hereinafter "method"), generally indicated at  
12 reference character 100 in FIG. 1, for collectively generating  
13 user-created designs of products and property via a  
14 communications network, such as the Internet.

15           As noted in the background discussion, product design is a  
16 key factor which can determine the commercial success or failure  
17 of a product. To this effect, the method 100 functions to  
18 increase the number of potential product designs from which a  
19 manufacturer/producer of a product may select for a future  
20 product, or for modifying and updating an existing product.  
21 While the invention itself does not "generate" or produce new  
22 product designs per se, the method 100 provides the online  
23 environment and the design tools with which consumers and users  
24 may individually create product designs. In this manner,

1 producers are able to "generate," in a collective sense, a  
2 multitude of designs which would otherwise have been difficult,  
3 if not impossible, to obtain. Furthermore the collection of  
4 user-created designs may more accurately reflect the popular  
5 opinion, style, and/or trend relating to product designs, to  
6 thereby enable manufacturers to produce a more appealing, and  
7 commercially viable product.

8 It is notable that the term "product," is defined and  
9 understood herein and in the claims to mean any item or class of  
10 items, preferably of manufactured origin, which is commercially  
11 or otherwise made available to the general public. Preferably,  
12 the product is an existing item already in production, and  
13 popular or otherwise publicly known. In this regard, product  
14 recognition would allow users to better ascertain any areas for  
15 aesthetic design improvement. However, the product may also be a  
16 non-existing item that is planned for production. Typical  
17 examples of contemplated target products include, but are not  
18 limited to, vehicles, electronics, appliances, furniture,  
19 clothes, toys, sports products, etc. Furthermore "product" is  
20 broadly defined to also include real estate and intellectual  
21 properties suitable for designing, including, but not limited to  
22 building architecture and adornment, and trademarks.

23 It is also notable that although the following discussion  
24 will be primarily in the context of the Internet (113 in FIG. 1)  
25 and the World Wide Web, the term "communications network" as used

1 herein and in the claims, is intended to include all forms of  
2 network environments known to one in the relevant technical art.  
3 Thus the method 100 is equally applicable to all interconnected  
4 computer systems capable of transmitting and receiving data,  
5 including, but not limited to, all telecommunications networks  
6 such as the Internet 113, i.e. the World Wide Web, gopher, and  
7 BBS systems, hardwire telephony, wireless networks including  
8 cellular and PCS systems, satellite networks, etc. Furthermore,  
9 communications networks include localized and regional networks  
10 such as intranets and local area network (LAN) systems which  
11 interconnect a relatively few number of user systems or  
12 terminals, typically by means of a centralized server.

13 FIG. 1 shows the flow of user access and information that  
14 occurs in the method 100. In particular, the method 100 enables  
15 a host service provider operating a remote host system, generally  
16 indicated at reference character 101, to provide a graphic design  
17 software 103 to users in the general public, represented by three  
18 representative users indicated at reference characters 107-109 in  
19 FIG. 1. The software 103 is typically installed on data storage  
20 means 104, such as a hard drive disk or other data storage  
21 medium, and is processed and executed by data processing means,  
22 i.e. a central processing unit (CPU) (not shown). Furthermore,  
23 the software 103 is network configured to run multiple,  
24 concurrent, and independent program sessions on the remote host  
25 system 101 using a single software package, in a manner known in



1 the relevant art. Thus, multiple users may concurrently and  
2 independently access and operate the program, as indicated by  
3 arrows 110, 111, and 112, as will be discussed further below.

4 The graphic design software 103 preferably has two  
5 application modules, including a database module containing  
6 product data for at least one product. Preferably the product  
7 data includes various parts images associated with a particular  
8 product, which serves to preserve a product's distinct features.  
9 For example, a particular type of automobile will have stored in  
10 the database module, parts images specific to the particular  
11 automobile, such as original fenders, doors, wheels, seating,  
12 etc., as well as steering wheels, and interior dashboard  
13 configurations. The database module also includes other product  
14 data, such as specifications, finally-assembled images, and other  
15 information particular to the product. Furthermore, the graphic  
16 design software 103 also includes a graphic tool module for  
17 creating, editing, and otherwise graphically manipulating and  
18 visually affecting graphic images, namely the parts images  
19 associated with the particular product. The graphic tool module  
20 may include traditional editing features such as cropping,  
21 sizing, warping, color, etc., of existing graphic images, i.e.  
22 the parts images of a product. However, it is not limited only  
23 to such. The graphic tool module may also feature design tools  
24 which allow a user to create and utilize his/her own parts in

1 developing a unique design, without resorting to the original  
2 specifications supplied by the available parts images.

3 As can be seen in FIG. 1, the graphic design software 103  
4 can be concurrently and independently accessed by multiple users  
5 from client systems 107-109 by remote interface means 106 of the  
6 remote host system 101. As used herein and in the claims, the  
7 remote interface means 106 is a suitable networking hardware or  
8 software application known in the relevant art of computer  
9 networking which enables multiple users to remote access  
10 designated data located in a host system, from a client system.  
11 The term "access" as used herein and in the claims, is defined  
12 and understood to mean initializing and running a software  
13 application where it is presently installed. Thus, because the  
14 graphic design software 103 is preferably installed on the remote  
15 host system 101, remote accessing of the software by a user from  
16 a client system 107-109 involves running the program 103 on the  
17 remote host system 101, and only the screen output is transmitted  
18 to and displayed on the client system 107-109.

19 It is notable that the term "access," when discussed in  
20 reference to the Internet, has traditionally been limited in  
21 meaning to situations where a user is connected to the Internet  
22 via an Internet service provider (ISP) or when specified "web  
23 pages" are downloaded to a client system when a corresponding  
24 uniform resource locator (URL) address is entered. However,  
25 "access" has not been popularly used to describe the initializing

1 and operation of remotely located software. This limitation has  
2 been largely due to the relatively slow and inefficient data  
3 transfer rate of traditional modems connected by means of  
4 traditional telephone lines. However, as is known by those  
5 conversant in the technical field, "access" and operation of  
6 remotely located software programs can now be realized on a real  
7 time basis with the growing use of high-speed modems, cable, T1,  
8 and digital subscriber lines (DSL) as preferred data conduits.  
9 These types of preferred data conduits are now available through  
10 various ISP's 102 to allow virtually real time remote operation.  
11 Thus, FIG. 1 illustrates direct access to a graphics design  
12 software 103 by connecting to the Internet 113 provided by such  
13 an ISP 102. In this manner, operation of the software 103 would  
14 be displayed on a user's client system virtually instantaneously  
15 without significant or noticeable delay.

16 FIG. 2 illustrates in block diagram form the real time  
17 operation of a preferred embodiment of the method 100 of the  
18 present invention. As can be seen in FIG. 2, a user starts at  
19 block 200 after accessing the remote host system 101 from a  
20 remote location. Preferably, although not shown in the figures,  
21 users would typically be required to register with the host  
22 service provider by opening a personal user account, prior to  
23 accessing the graphic design software 103, in order to establish  
24 a user's profile with the host system and to save a user's  
25 unfinished designs therein. As shown in FIG. 1, access to the

1 graphic design software 103 is preferably predicated upon  
2 entering a host web page 105. Thus, from block 200 in FIG. 2, a  
3 host web page is displayed at block 201, which typically  
4 introduces the graphic design software and its operation, and  
5 provides an initializing link to the software. At block 203, the  
6 user decides whether to access the graphic design software.

7 If yes, the software is initialized and a products menu is  
8 displayed, as shown in block 204, listing the target products  
9 available for designing. At block 206, the user decides on a  
10 target product and enters the selection, upon which a  
11 determination is made whether the selection is a valid choice.  
12 If yes, a design workscreen (300 in FIG. 3) is displayed, as  
13 shown in FIG. 3, including a parts listing 304, and an editing  
14 tools menu 303. The design workscreen 300 also includes a  
15 graphics window 301 where an outline or silhouette 302 of the  
16 product is preferably displayed. The outline/silhouette  
17 functions to guide the user in maintaining the basic structure of  
18 the product, and is not intended to be limiting in any manner.  
19 At block 210, the user may next select a target parts image 307.  
20 Preferably, selection of a parts image can be accomplished from a  
21 menu, such as the parts listing 304 as shown in FIG. 3. In this  
22 embodiment, a selected parts image 307 is displayed on the  
23 outline 302 of the product for the first time. In an alternative  
24 embodiment, all parts images associated with a particular product  
25 may be pre-displayed, whereby the user may then directly select a

1 parts image, e.g. by pointing and clicking a mouse. In any case  
2 the validity of the choice is determined at block 211. If the  
3 selection is not valid, another selection must be made. If  
4 valid, the part selection 307 will be subject to subsequent  
5 manipulation. At block 213, the user selects means for visually  
6 affecting a graphic image, i.e. an edit tool. It is notable that  
7 once the design workscreen is entered, the order in which edit  
8 tools and target parts images are selected, blocks 210 and 213,  
9 may be reversed. In any case, following block 213, the remote  
10 host system determines if the choice was valid at block 214. If  
11 yes, the edit tool is selected and the user manipulates the  
12 selected parts with the selected edit tool at block 215. At this  
13 point, the user is given the option to save his unfinished design  
14 in his user account at block 216. If yes, the design is saved to  
15 the data storage means at block 217. Alternatively, the user may  
16 opt to save the unfinished design on his own local data storage  
17 means. Next, the user may print the design on a local printer,  
18 as indicated at block 218 in FIG. 2, by selecting a print button  
19 305 in FIG. 3 shown on the workscreen 300. At block 220, the  
20 method 100 asks the user whether the design is complete, i.e.  
21 whether the user has a finished design that is ready for  
22 submission. If not, the method takes the user back to the design  
23 workscreen via entry point C, indicated at reference character  
24 209. If yes, the user has the option to submit the design at  
25 block 221. As shown in FIG. 3, this is typically accomplished by

1 a "submit" button on the design workscreen 306. If yes, the  
2 finished design is storably received on data storage means, as  
3 shown at block 222. It is notable that the finished design need  
4 not be storably received at the same data storage means (104 in  
5 FIG. 1) as where the graphics design software 103 is installed;  
6 alternatively, different data storage medium located may be used.  
7 Next, at block 223, the user will preferably also have the option  
8 of printing the submitted final design, which will then be  
9 printed at block 224. And finally, the method 100 determines  
10 whether the user would like to design another product stored in  
11 the database module. If yes, the user is taken back to block 204  
12 via entry point B, indicated at reference character 205. If not,  
13 the graphic design software 103 will terminate and the user is  
14 taken back to the host web page at block 201 via entry point A  
15 202.

16 After storably receiving a sufficient plurality of final  
17 designs, one preferred embodiment of the method 100 further  
18 provides a step of selecting at least one winner to receive a  
19 corresponding award incentive (not shown). The selection is  
20 preferably made based on pre-defined selection criteria, such as  
21 the degree of variance between the final design and a pre-  
22 determined design scheme. Alternatively, the pre-defined  
23 selection criteria may be based on a manufacturer/producer's  
24 decision to commercially construct and produce a final design  
25 submission. Providing an award incentive functions to draw more

1 users to the remote host system 101, to create and submit user-  
2 created designs.

3 It is notable that while the remote host service provider is  
4 typically a producer of a product who wishes to directly inquire  
5 and compile design ideas and suggestions from the general public,  
6 this need not always be the case. A third party provider may  
7 also provide such graphic design software on a remote host  
8 system, whereby users are given a selection of products from  
9 which to choose and design. These third party providers may in  
10 turn, then sell the acquired design submissions to the  
11 corresponding manufacturer/producer for their consideration and  
12 evaluation.

13 In this manner, the method and system 100 of the present  
14 invention would allow the manufacturer of a product to get a  
15 wealth of design suggestions for their respective product. This  
16 will give the manufacturer an exorbitant amount of design ideas,  
17 many of which the manufacturing company would never have  
18 conceived of independently. It would also expose a manufacturer  
19 to the public's varying opinions and input of what the product  
20 should look like. Being informed of the going consumer  
21 trends/styles of the times, the manufacturer would be able to  
22 design the product so as to maximize its potential sale.  
23 Implementation of this invention may also help promote awareness  
24 of a particular product line.

